



#### PATENT APPLICATION

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q96589

Hiroshi SUGIYAMA, et al.

Appln. No.: 10/598,789

Group Art Unit: Unknown

Confirmation No.: 1416

Examiner: Unknown

Filed: September 12, 2006

For:

NOVEL INDOLE DERIVATIVE FOR ALKYLATING SPECIFIC BASE SEQUENCE OF DNA

AND ALKYLATING AGENT AND DRUG CONTAINING THE DERIVATIVE

# INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §§ 1.97 and 1.98

## MAIL STOP AMENDMENT

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 C.F.R. § 1.56, Applicant hereby notifies the U.S. Patent and Trademark Office of the documents which are listed on the attached PTO/SB/08 A & B (modified) form and/or listed herein and which the Examiner may deem material to patentability of the claims of the above-identified application.

- 1. J.M. Turner, et al. "Recognition of Seven Base Pair Sequences in the Minor Groove of DNA by Ten-Ring Pyrrole-Imidazole Polyamide Hairpins", J. Am. Chem. Soc., (1997), 119, pp. 7636-7644 with Abstract.
- 2. R. Clairac, et al. "NMR Characterization of Hairpin Polyamide Complexes with the Minor Groove of DNA", Journal of the American Chemical Society, Vol. 119, No. 34, August 27, 1997 with Abstract.
- 3. A. Chang, et al. "Strand Selective Cleavage of DNA by Diastereomjers of Hairpin Polyamideseco-CBI Conjugates", J. Am. Chem. Soc., (2000), 122, pp. 4856-4864 with Abstract.

### INFORMATION DISCLOSURE STATEMENT

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- 4. Z. Tao, et al. "Rational Design of Sequences-Specific DNA Alkylating Agents Based on Duocarmycin A and Pyrrole- Imidazole Hairpin Polyamides", J. Am. Chem. Soc., (1999), 121, pp. 4961-4967 with Abstract.
- 5. Z. Tao, et al. "Highly Cooperative DNA Dialkylation by the Homodimer of Imidazole-Pyrrole Diamide-CPI Conjugate with Vinyl Linker", J. Am. Chem. Soc., (2000), 122, pp. 1602-1608 with Abstract.
- 6. T. Bando, et al. "Molecular Design of a Pyrrole-Imidazole Hairpin Polyamides for Effective DNA Alkylation", Chem.Eur. J., (2002), 8, No. 20, pp. 4781-4790 with Abstract.
- 7. D. Boger, et al. "An Improved Synthesis of 1,2,9,9a-Tetrahydrocyclopropa[c]benz[e]indol-4-one (CBI): A Simplified Analogue of the CC-1065 Alkylation Subunit", J. Org. Chem., (1992), 57, pp. 2873-2876.
- 8. D. Boger, et al. "An Efficient Synthesis of 1,2,9,9a-Tetrahydrocyclopropa[c]benz[e]indol-4-one (CBI): An Enhanced and Simplified Analog of the CC-1065 and Duocarmycin Alkylation Subunits", J. Org. Chem., (1995), 60, pp. 1271-1275.
- 9. D. Boger, et al. "Synthesis of *N*-(*tert*-Butyloxycarbonyl)-CBI, CBI, CBI-CDPI<sub>1</sub>, and CBI-CDPI<sub>2</sub>: Enhanced Functional Analogues of CC-1065 Incorporating the 1,2,9,9a-Tetrahydrocyclopropa[*c*]benz[*e*]indol-4-one (CBI) Left-Hand Subunit", J. Org. Chem., (1990), 55, pp. 5823-5832.

One copy of each of the listed documents is submitted herewith.

The present Information Disclosure Statement is being filed: (1) No later than three months from the application's filing date; (2) Before the mailing date of the first Office Action on the merits (whichever is later); or (3) Before the mailing date of the first Office Action after filing a request for continued examination (RCE) under §1.114, and therefore, no Statement under 37 C.F.R. § 1.97(e) or fee under 37 C.F.R. § 1.17(p) is required.

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The submission of the listed documents is not intended as an admission that any such document

constitutes prior art against the claims of the present application. Applicant does not waive any right to

take any action that would be appropriate to antedate or otherwise remove any listed document as a

competent reference against the claims of the present application.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and

the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said

Deposit Account.

Respectfully submitted,

Registration No. 32,607

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WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: January 5, 2007

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Substitute for Form 1449 A & B/PTO  INFORMATION DISCLOSURE  STATEMENT BY ADDITION		Сотр	olete if Known	
		Application Number	10/598,789	
INFOR	MATION DISC	TLOSUED 115	Confirmation Number	1416
STATI	EMENT BY AP	DLICANT	Filing Date	September 12, 2006
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		13	Examiner Name	Unknown
Sheet	1	of 2 Truncal	Attorney Docket Number	Q96589

	U.S. PATENT DOCUMENTS							
Eveminer	Cite	Document 1	Number	Publication Date				
Initials*		Number	Kind Code <sup>2</sup> (if known)	MM-DD-YYYY	Name of Patentee or Applicant of Cited Document			
		US						
		US						

	FOREIGN PATENT DOCUMENTS							
Examiner	Cite	For	reign Patent Docun	ient	Publication Date	Name of Patentee or		
Initials* No.1	Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)	MM-DD-YYYY	Applicant of Cited Document	Translation <sup>6</sup>		

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation <sup>6</sup>
		J.M. Turner, et al. "Recognition of Seven Base Pair Sequences in the Minor Groove of	
		DNA by Ten-Ring Pyrrole-Imidazole Polyamide Hairpins", J. Am. Chem. Soc., (1997),	
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Examiner Signature	Date Considered	· .
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<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kind Codes of USPTO Patent Documents at www.uspto.gov, MPEP 901.04 or follow the hyperlink from the title of the document to the intranet. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to indicate here if English language Translation is attached.

ubstitute for Form 1449 A & B/PTO		Complete if Known		
			Application Number	10/598,789
INFO	MATION	DISCLOSURE 40	Confirmation Number	1416
STAT	EMENT D	DISCLOSURE 4	Filing Date	September 12, 2006
STATEMENT BY APPLICANT			First Named Inventor	Hiroshi SUGIYAMA
(use	as many shee	ts as necessary) JAN 0 5 2007	Art Unit	Unknown
		12	Examiner Name	Unknown
Sheet	2	of X	Attorney Docket Number	Q96589

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Examiner Initials*	No.1	Number	Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document		
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FOREIGN PATENT DOCUMENTS								
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